

Application No.: 10/658,260

Docket No.: 22106-00042-US

REMARKS

Claims 1-13 are pending in the case. Claim 1 has been amended by way of the present amendment. Reconsideration is respectfully requested.

In the outstanding Office Action, claims 1-13 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,548,279 (Gaines) in view of U.S. Patent No. 6,472,878 (Bruchmann).

Claim Rejections under 35 U.S.C. Section 103

Claims 1-13 were rejected under 35 U.S.C. 103(a) as being unpatentable over Gaines in view of Bruchmann. Applicant respectfully traverses the rejection.

Claims 1 and 4 have been amended to clarify the invention. In particular, typographical errors in the claims have been corrected. The amendments to the claims raise no issues of new matter.

Gaines discloses a method and apparatus for detecting a power line.¹ In particular, Gaines discloses a power line detecting apparatus that includes a sensing means 16 for detecting the magnetic field generated by the current conducted through power lines 12.² Further, Gaines discloses a controller 60, memory device 62 and analog-to-digital converter 64.³

However, Gaines nowhere discloses, as recited in claim 1:

connecting means for the feeding of the device and for the communication, wherein said device includes means for the partialised feeding of such means for detecting a current (emphasis added).

¹ Gaines at ABSTRACT.

² *Id.* at FIG. 2; column 4, lines 19-23.

³ *Id.* at FIG. 3; column 4, lines 18-44.

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In fact, the outstanding Office action acknowledges the above-cited deficiencies of Gaines and attempts to overcome these deficiencies with Bruchmann.⁴ However, as will be discussed below, Bruchmann cannot overcome the deficiencies of Gaines.

Bruchmann discloses a current measuring element.⁵ In particular, Bruchmann relates to a current measuring element that mainly comprises following features:

- an insulating housing 10 that carries a plurality of conductors 12;
- a cover 20 made of insulating material mounted on top of the insulating housing 10 and further comprising a plurality of pockets 22 made of insulating material, each of which suitable for containing a Hall sensor 42;
- a main circuit board 30 that further includes small circuit boards 40 each of which further include a plurality of Hall sensors 42, wherein the main circuit board is mounted on top of the cover 20; and
- a covering 50 that is electrically connected to said main circuit 30 by means of internal connectors 34.⁶

However, in contrast to the “connecting means” recited in claim 1, Bruchmann discloses internal connectors 34 with a completely different function. In particular, Bruchmann discloses internal connectors 34 that have the function of connecting the covering 50 to the main circuit board 30 *internally* to the current measuring element.⁷ That is, in contrast to the *internal connection* disclosed in Bruchmann, the “connecting means,” as recited claim 1, provides an interface for *external connections* to the device for measuring current 1. Specifically, the interface for external connections to the device for measuring current 1 in the claimed invention is provided through feeding means 41 and means of bidirectional communication 42 of connecting means 4.⁸

In addition, Applicants respectfully submit that the limitations of “feeding” and “communication” recited in claim 1 are inherently *external* (e.g., “bidirectional

⁴ Outstanding Office Action mailed September 7, 2004, at page 2, lines 10-15.

⁵ Bruchmann at ABSTRACT.

⁶ *Id.* at FIG. 1, column 2, line 62; to column 3, line 55.

⁷ *Id.* at FIG. 1, column 3, line 67; to column 4, line 2.

⁸ Specification, page 6, line 23; to page 7, line 6.

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Further, the internal connectors 34 disclosed by Bruchmann are *not* functionally equivalent to the "means for the partialised feeding," as recited in claim 1. In particular, in the claimed invention these "means for the partialised feeding" are *directly connected* to the means for detecting current 11 (e.g., Hall sensors) that control their feeding. In contrast to the claimed invention, Bruchmann discloses the internal connectors 34 are *connected through* the main circuit board 30 to the Hall sensors 42.⁹

Further, Bruchmann nowhere discloses "means for the partialised feeding" having the same function as recited in claim 1. That is, as discussed above, the function of the "means for the partialised feeding" of the claimed invention is completely different from that of Bruchmann (i.e., *directly connected* vs. *connected through*).

Furthermore, Applicants respectfully submit that there is nothing in Bruchmann that would have motivated one of ordinary skill in the art to modify the function/structure of the apparatus of Gaines so as to arrive at the current measuring device of claim 1. Thus, for the reasons discussed above, Applicants respectfully submit that Bruchmann cannot overcome the above-discussed deficiencies of Gaines.

Therefore, it is respectfully submitted that neither Gaines nor Bruchmann, whether taken alone or in combination, disclose, suggest or make obvious the claimed invention and that claim 1, and claims dependent thereon, patentably distinguish thereover.

|⁹ See Bruchmann at column 3, lines 23-39 and lines 48-54.

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Conclusions

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Respectfully submitted,

By Myron Keith Wyche
Myron Keith Wyche
Registration No.: 47,341
CONNOLLY BOVE LODGE & HUTZ LLP
1990 M Street, N.W., Suite 800
Washington, DC 20036-3425
(202) 331-7111
(202) 293-6229 (Fax)
Attorney for Applicant